

ISO 9001:2015 Implementation of State University and Colleges (SUCs) in region 3, Philippines

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Abstract— With memorandum circular no. 2016-1 dated May 12, 2016 that was issued by the Philippine Administrative Order (AO) No. 25 Inter-Agency Task Force, establishing a Quality Management System (QMS) to adopt the ISO 9001:2015, had been mandatory to government agencies. The study assessed the ISO 9001:2015 implementation of quality assurance (QA) management in terms of context of organization, leadership, planning, support, operation, performance evaluation and improvement. The study used quantitative descriptive design. The respondents for each university 10 members chose randomly coming from the Quality Assurance department. On the assessment of the SUC's Quality Assurance Management towards the implementation of the ISO 9001:2015, it was revealed that SUCs scored high on the different clauses such as context of organization, leadership, planning, support, operation, performance evaluation, and improvement. Among these clauses, the context organization got the highest mean where the emphasis is on determining the external and internal issues that are relevant to its purpose and determined the needs and expectation of interested parties that are relevant to the QMS. For state universities and colleges, ISO 9001:2015 implementation is a clear evaluation indicator if an institution organizes a standard implementation of their processes and procedures in all their programs such as academic, training and research. Thus, it is recommended that higher educational institutions should be required to undergo ISO 9001:2015 certification to fully meet the satisfaction of the clientele they serve.

I. INTRODUCTION

With memorandum circular no. 2016-1 dated May 12, 2016 that was issued by the Philippine Administrative Order (AO) No. 25 Inter-Agency Task Force, establishing a Quality Management System (QMS) to adopt the ISO 9001:2015, had been mandatory to

government agencies. In relation, ISO 9001:2015 certification serves as a requirement for the grant of the Performance-based Bonus (PBB). Organizations use the ISO 9001:2015 to show an ability to consistently offer customer- and regulatory- compliant products and services and demonstrate continuous improvement.

Neyestani and Juanzon (2017) stated that this quality management standard is an effective tool to achieve the objectives of the manufacturing and service sectors. Manghani (2011) also emphasized that it is mandatory for research organizations alike to establish, manage and monitor their quality control and quality assurance systems and their integral standard operating procedures and other professional reports to provide high quality products and services that meet the needs and desires of the client in full.

According to Pepurah (2018), the result of his study has shown that international students in the Philippines accept that their choice of selecting a university is influenced by ISO 9001. With these result, there is a probability of increasing the population of students. Further, Giatman (2015) concluded that implementation of QMS ISO in a wide variety of professional and vocational training institutions have increased the efficiency of organizational management institutions.

There is a gap of studies on knowing the implementation of ISO 9001:2015 among academic institutions. The study is timely and relevant for the universities, whether ISO certified and non-certified, to serve as a guide that will yield both employee and stakeholders' satisfaction.

II. CONCEPTUAL FRAMEWORK

Handayani et al. (2018) stated that the application of ISO 9001:2015 has to be recognized and reviewed because there are many deficiencies. Further, Chen et al. (2016) recommended that in order to survive and prosper in a highly competitive business environment, it is not enough to introduce a QMS based on the ISO 9001 standard only if it is designed to improve customer satisfaction by avoiding product / service non-conformities.

According to Purwanggono and Handayani (2018), The constraints faced by the company when running the quality management system ISO 9001: 2015 are less control by the management representative regarding the implementation of the quality management system (Clause 4), the focus on improving customer satisfaction has not been well maintained in addition to the quality policy not fully understood until operator level (Clause 5), implements a quality management system, the desired results are not in line with the target (clause 6), the company has not well defined the skills of the worker in job specialization. In addition to the quality policy, employees do not understand the quality objectives (clause 7), if a discrepancy exists, the follow-up company to take action is still not as frequently found as customer complaints in the same (clause 10).

III. OBJECTIVE OF THE STUDY

The study assessed the ISO 9001:2015 implementation of State University and Colleges (SUCs) in terms of context of organization, leadership, planning, support, operation, performance evaluation and improvement.

IV. METHODOLOGY

The study used quantitative descriptive design. Quantitative descriptive design attempts to describe existing conditions and involves collecting data. It further concern with the condition or relationship that exists; practices that prevail; and beliefs and processes that are going on; effects that being felt or trends that are developing (Mujis, 2010). The researcher verified that two (2) state universities in Nueva Ecija and one (1) state university in Tarlac were ISO 9001:2015 certified with the certification period of on or before August 2019. The respondents for each university 10 members chose randomly coming from the Quality Assurance department.

V. RESULTS AND DISCUSSIONS

Table 1: Assessment of QA Management towards Context of Organization

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The organization determined the external and internal issues that are relevant to its purpose	4.00	SA	4.00	SA	3.33	SA	3.78	SA
2. The organization has strategic direction affect its ability to achieve the intended results of the QMS	3.70	SA	2.83	A	3.67	SA	3.40	SA
3. The organization has a way of reviewing and	4.00	SA	3.83	SA	4.00	SA	3.94	SA

monitoring the QMS on a regular basis								
4. The organization determined the needs and expectation of interested parties that are relevant to the QMS.	4.00	SA	3.83	SA	3.33	SA	3.72	SA
5. The organization has a way of reviewing the needs and expectations of interested parties that are relevant to the QMS.	4.00	SA	3.58	SA	3.67	SA	3.75	SA
6. The organization has established QMS that includes the processes needed and its sequence and interaction.	3.90	SA	3.00	A	3.67	SA	3.52	SA
Average Weighted Mean	3.93	SA	3.51	SA	3.61	SA	3.69	SA

Table 1 shows the result of the assessment of the QA management towards the implementation of ISO 9001:2015 clauses in terms of Context of Organization.

SUC 1 strongly agreed in all the statements that describe the Context of Organization clause of ISO 9001:2015 having an average weighted mean of 3.93. This result shows that SUC 1 has strategic direction to achieve the intended results of its quality management system.

On the other hand, SUC 2 got an average weighted mean of 3.51 which has a verbal interpretation of "Strongly Agree". SUC 2 QA management strongly agreed that *"The organization determined the external and internal issues that are relevant to its purpose"* (M = 4.00) which resulted to the highest mean. The statement which got the lowest mean was *"The organization has strategic direction affect its ability to achieve the intended results of the QMS"* having a mean of 2.83 and with a verbal description of Agree.

SUC 3 showed a mean of 3.61 and with a verbal interpretation of Strongly Agree. The statement *"The organization has a way of reviewing and monitoring the QMS on a regular basis."* got the highest mean of 4.00 and with a verbal interpretation of Strongly Agree. And, the statements *"The organization determined the external and internal issues that are relevant to its purpose"* and *"The organization determined the needs and expectation of interested parties that are relevant to the QMS."* both got a mean of 3.33 and with a verbal interpretation of Strongly Agree.

Overall, the assessment of the QA management on the Organization of Context clause of ISO 9001:2015 score a mean of 3.69 having a verbal interpretation of Strongly Agree. The different SUCs have highlighted in their answers on the three statements which the strongly agreed: Statements 1, *"The organization determined the external and internal issues that are relevant to its purpose"* (M = 3.78); and statement 3, *"The organization has a way of reviewing and monitoring the QMS on a regular basis"* (M = 3.94); and statement *"The organization determined the needs and expectation of interested parties that are relevant to the QMS"* (M = 3.95). The results imply that the QA management of ISO 9001:2015 had already established mechanisms to address organizational issues, to review and monitor the system, and to identify the expectations of internal and external parties important to the quality management system.

The results support the study of Militaru et al. (2016) which concluded that the context of the organization is a new clause requiring the organization to consider both internal and external issues that may affect its strategic objectives and the planning of the Quality Management System (QMS). Further, Makolov (2019) concluded that the context of an organization that plays a key role in ensuring the sustainability and efficacy of the quality control system; every organization is an open network that communicates with the external environment. However, Medić et al., (2016) recommended that an organization must recognize those external and internal variables (both positive and negative) that are important to its 'context' and that can influence its ability to achieve the expected outcome(s) of its management system.

Table 2: Assessment of QA Management towards Leadership

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The top management of the organization has the taken the accountability for the effectiveness of the QMS.	3.70	SA	3.75	SA	3.67	SA	3.71	SA
2. The QMS has established and communicated its policy and objectives.	4.00	SA	2.83	A	4.00	SA	3.61	SA
3. The objectives had been established at relevant functional, process, departmental and individual levels.	4.00	SA	3.67	SA	3.67	SA	3.78	SA
4. The organization has the QMS' requirements integrated into business processes and has management promoted awareness of the process approach and risk based thinking.	3.70	SA	3.58	SA	3.67	SA	3.65	SA
5. The organization has established and communicated the responsibilities and authorities for the effective operation of the QMS.	3.80	SA	3.58	SA	3.67	SA	3.68	SA
6. The organization has risk and opportunities determined and addressed to enhance customer satisfaction.	3.90	SA	2.92	A	3.33	SA	3.38	SA
Average Weighted Mean	3.85	SA	3.39	SA	3.67	SA	3.64	SA

Table 2 shows the result of the assessment of the QA management towards the implementation of ISO 9001:2015 clauses in terms of Leadership.

SUC 1 got an average weighted mean of 3.85 and with verbal interpretation of *Strongly Agree*. Items 2 and 3 scored the highest among other items which showed that SUC 1 strongly agreed that “*The QMS has established and communicated its policy and objectives.*” (M = 4.00) and “*The objectives had been established at relevant functional, process, departmental and individual levels.*” (M = 4.00). These results imply that SUC 1 recognizes the implementation of ISO 2015:2015 in terms of Leadership by creating and communicating its policy and objectives from individuals up to departmental levels.

On the other hand, SUC 2 got an average weighted mean of 3.39 and with verbal interpretation of *Strongly Agree*. This state university got a highest mean of 3.75 on Item 1 with a verbal description of *Agree* stating that “*The top management of the organization has taken the accountability for the effectiveness of the QMS.*” Items 2 and 6 got lower scores stating SUC 2 agreed that “*The QMS has established and communicated its policy and objectives.*” (M = 2.83) and “*The organization has risk*

and opportunities determined and addressed to enhance customer satisfaction.” (M = 2.92).

SUC 3 scored an average weighted mean of 3.64 and with a verbal interpretation of *Strongly Agree*. Item 2 got the highest mean of 4.00 and which showed SUC 3 strongly agreed that “*The QMS has established and communicated its policy and objectives.*” And Item 6 got the lowest mean of 3.33 and with a verbal interpretation of *Strongly Agree* stating that “*The organization has risk and opportunities determined and addressed to enhance customer satisfaction.*”

The overall average weighted mean of this clause was 3.64 and with a verbal interpretation of *Strongly Agree*. The statement with highest means were *The objectives had been established at relevant functional, process, departmental and individual levels* (X = 3.78), “*The top management of the organization has the taken the accountability for the effectiveness of the QMS,*” (X= 3.71), and “*The organization has established and communicated the responsibilities and authorities for the effective operation of the QMS* (X=3.68). The results suggest that the administration of ISO 9001:2015 quality management system has communicated the important

details of operation to all involved persons, from individual to departmental levels.

Paulová & Míkva (2011) found that leadership in all types of organizations is seen primarily as a key principle for a functioning quality management system. Seconded by Djordjevic et al., (2020), leaders in the management of organizations are the initiators of all operations and changes. In comparison with the results, Mo-Ching (2011) concluded that if internal communication between management and staff is appropriate and transparent among staff members, the commitment of

management and staff can be demonstrated by ISO audit. On the contrary with the results, Zajarskas & Ruževičius (2010) concluded that the organization's administrative members do not completely grasp the company's quality management principles; most staff think of the quality management program as a means of additional work. In relation with the indicators, Durivage & Vanhouwe (2017) agreed that the incorporation of risk-based analysis is perhaps the most important problem for those responsible for developing, installing, and managing a quality control program.

Table 3: Assessment of QA Management towards Planning

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The QMS has the assurance that it can achieve the intended result(s) from the addressed risks and opportunities.	3.50	SA	3.58	SA	3.33	SA	3.47	SA
2. The organization has established quality objectives at relevant functions, levels and processes.	3.90	SA	3.83	SA	3.67	SA	3.80	SA
3. The organization has planned actions to address the risks and opportunities.	3.90	SA	3.58	SA	3.67	SA	3.72	SA
4. There is a plan for determining the need for changes to the QMS.	3.70	SA	2.92	A	3.33	SA	3.32	SA
5. There is a plan for managing the implementation of the need for changes to the QMS.	3.60	SA	3.42	SA	4.00	SA	3.67	SA
6. The organization has integrated its planned actions into the system processes.	3.70	SA	2.67	A	3.67	SA	3.34	A
Average Weighted Mean	3.72	SA	3.33	SA	3.61	SA	3.55	SA

Table 3 shows the result of the Assessment of the QA management towards the implementation of ISO 9001:2015 clause in terms of Planning.

SUC 1 got an average weighted mean of 3.72 and with a verbal interpretation of *Strongly Agree*. Items 2 and 3 both have the highest means of 3.90 stating that SUC 1 strongly agreed that “The organization has established quality objectives at relevant functions, levels and processes.” and “The organization has planned actions to address the risks and opportunities.”

SUC 2 got an average weighted mean of 3.33 and with has a verbal interpretation of *Strongly Agree*. Item no. 2 has the mean of 3.83 stating that SUC 2 strongly agreed that

“The organization has established quality objectives at relevant functions, levels and processes.” On the other hand, Item 4, “There is a plan for determining the need for changes to the QMS.” (M = 2.92) and Item 6, “The organization has integrated its planned actions into the system processes.” (M = 2.67), both got the lowest mean and with verbal interpretation of *Agree*.

And, SUC 3 got an average weighted mean of 3.61 and with verbal interpretation of *Strongly Agree*. Item 5 received the highest mean of 4.00 that states “There is a plan for managing the implementation of the need for changes to the QMS.”, and with a verbal interpretation of *Strongly Agree*. Both Items 1 and 4 have the lowest mean of 3.33 stating that SUC 3 strongly agreed that “The QMS has the assurance that it can achieve the intended result(s)

from the addressed risks and opportunities.” And “There is a plan for determining the need for changes to the QMS.”

Overall, with an average weighted mean of 3.55 and a verbal interpretation of *Strongly Agree*, the Planning clause implies that the quality management system has prepared action plans for the implementation wherein they already created plans in anticipation of the changes to occur if ever there will be risks and opportunities. To highlight these were the statements which got highest means, *the organization has established quality objectives at relevant functions, levels and processes* (M = 3.80), *the organization has planned actions to address the risks and opportunities* (X=3.72), and *there is a plan for managing*

the implementation of the need for changes to the QMS (X=3.67).

Evidenced by Shawyun (2016), the strategic plan developed must be aligned with the Units' strategic plan in order to understand and apply strategic management to the HEI to ensure quality education and to ensure that strategic management is successful. Confirmed by the results of this study, Vykydal et al. (2013) proved that organizations can eliminate threats to its implementation in order to apply quality planning approaches in a wider context. Further, Kozakiewicz & Sawicki (2017) strengthen the indicators of this study by their recommendation that planning is important to prepare and take action on the defined threats and opportunities, based on the information received.

Table 4: Assessment of QA Management towards Support

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The organization has determined and provided the resources needed for the establishment, implementation, maintenance and continual improvement of the QMS.	3.90	SA	3.75	SA	3.33	SA	3.66	SA
2. The organization has determined, provided and maintained the infrastructure necessary for the operation of processes and to achieve conforming products or services.	3.80	SA	3.58	SA	3.33	SA	3.57	SA
3. The organization has determined and provided the resources needed to ensure valid and reliable results by monitoring or measuring the evidence of conformity of products and services to specified requirements.	3.80	SA	3.58	SA	3.33	SA	3.57	SA
4. The organization has determined the knowledge necessary for the operation of its processes and achievement of conformity of products and services.	3.80	SA	3.58	SA	3.67	SA	3.68	SA
5. The organization has determined internal and external communications relevant to the QMS.	4.00	SA	3.08	A	3.33	SA	3.47	SA
6. The organization has ensured that people doing work under their control are aware of the quality policy and objectives, their contribution to these and the implications of not conforming.	4.00	SA	2.83	A	4.00	SA	3.61	SA
Average Weighted Mean	3.88	SA	3.40	SA	3.50	SA	3.60	SA

Table 4 shows the result of the assessment of the QA management towards the implementation of ISO 9001:2015 clause in terms of Support.

SUC 1 got an average mean of 3.88 and with a verbal interpretation of *Strongly Agree*. Items 5 and 6 received the highest mean of 4.00 stating that SUC 1 strongly agreed with the statements “*The organization has determined internal and external communications relevant to the QMS.*” and “*The organization has ensured that people doing work under their control are aware of the quality policy and objectives, their contribution to these and the implications of not conforming.*”

SUC 2 received an average weighted mean of 3.40 with a verbal interpretation of *Strongly Agree*. Item 1 got the highest mean of 3.75 stating that SUC 2 strongly agreed that “*The organization has determined and provided the resources needed for the establishment, implementation, maintenance and continual improvement of the QMS.*” On the other hand, Item 6 got the lowest mean of 2.83 which states that SUC 2 agreed that “*The organization has ensured that people doing work under their control are aware of the quality policy and objectives, their contribution to these and the implications of not conforming.*”

SUC 3 got an average weighted average mean of 3.50 and with a verbal interpretation of *Strongly Agree*. Items 4 and 6 received the highest means stating SUC 3 strongly agreed with the statements “*The organization has determined the knowledge necessary for the operation of its processes and achievement of conformity of products and services.*” (M = 3.67) and “*The organization has*

ensured that people doing work under their control are aware of the quality policy and objectives, their contribution to these and the implications of not conforming.” (M = 4.00).

Overall, the average weighted mean of the Support clause was 3.61 with a verbal interpretation of *Strongly Agree*. The respondents strongly agreed that the organization has determined and provided the resources needed for the establishment, implementation, maintenance and continual improvement of the QMS (M = 3.66). They also strongly agreed that the organization has determined the knowledge necessary for the operation of its processes and achievement of conformity of products and services (X = 3.68). These results suggest that state universities’ administration had shown support to their quality management system in order to continue the delivery of the quality management system. This support was reflected in providing resources necessary to ensure and achieve compliant services, products and outputs

Mokamba et al. (2014) supported the results of this study as they concluded that all public universities need to embrace the culture of sound QMS processes in developing all of their infrastructural systems and processes, such as libraries, laboratories, workshop centers, accommodation facilities, and other facilities with certain procedure and processes. Zografaki et al. (2017) further supported the statements by their recommendation, to reap the full benefits of successful QMS implementation, HR needs to be at the forefront of the processes and long-term priorities of the company to be completely matched with the strategic ones.

Table 5: Assessment of QA Management towards Operation

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. There are certain processes for the provision of products and services that meet the specified requirements for the products and services.	3.10	SA	1.92	D	2.67	A	2.56	A
2. There is a process for reviewing and communicating with customers in relation to information relating to products and services, enquiries, contracts or order handling.	3.80	SA	3.42	SA	3.67	SA	3.63	SA
3. When changes are planned, they are carried out in a controlled way and actions taken to mitigate any adverse effects.	3.60	SA	3.33	SA	3.67	SA	3.53	SA
4. There is review conducted prior to the organization’s commitment to supply products	3.60	SA	2.83	A	3.67	SA	3.37	SA

and services.								
5. The organization ensures that externally provided processes, products, and services conform to specified requirements.	3.80	SA	3.67	SA	4.00	SA	3.82	SA
6. Any nonconforming outputs are managed so as to prevent their unintended use or delivery.	3.70	SA	3.42	SA	3.33	SA	3.48	SA
Average Weighted Mean	3.60	SA	3.10	A	3.50	SA	3.40	SA

Table 5 shows the result of the assessment of the QA management towards the implementation of ISO 9001:2015 clause in terms of Operation.

SUC 1 got an average weighted mean of 3.60 and with a verbal interpretation of *Strongly Agree*. Items 2 and 5 both received the highest mean of 3.80 stating that SUC 1 strongly agreed with the statements *“There is a process for reviewing and communicating with customers in relation to information relating to products and services, enquiries, contracts or order handling.”* and *“The organization ensures that externally provided processes, products, and services conform to specified requirements.”*

SUC 2 received a general weighted average of 3.10 and with a verbal interpretation of *Agree*. Item 5 got the highest mean of 3.67 stating that SUC 2 strongly agreed that *“The organization ensures that externally provided processes, products, and services conform to specified requirements.”* And on the other hand, SUC 2 disagreed that *“There are certain processes for the provision of products and services that meet the specified requirements for the products and services.”* (M = 1.92).

SUC 3 received a general weighted mean of 3.50 and with a verbal interpretation of *Strongly Agree*. Item 5 got the highest mean of 4.00 stating that SUC 3 strongly agreed that *“The organization ensures that externally provided processes, products, and services conform to specified requirements.”* And, Item 1 got the lowest mean

of 2.67 stating that SUC 3 agreed that *“There are certain processes for the provision of products and services that meet the specified requirements for the products and services.”*

Overall, this clause, Operation, garnered an average weighted mean of 3.40 with a verbal interpretation of *Strongly Agree*. The respondents strongly agreed that *The organization ensures that externally provided processes, products, and services conform to specified requirements* (M = 3.82) and *There is a process for reviewing and communicating with customers in relation to information relating to products and services, enquiries, contracts or order handling* (M = 3.63). These results imply that the quality management system of ISO 9001:2015 of state universities prepared for operation in terms of its controlled processes and actions. Through these, the operation is managed and maintained accordingly. Also, respondents agreed on the statement *There is review conducted prior to the organization’s commitment to supply products and services* (M = 3.56). This means the organization evaluates its QMS operations. On the contrary, it was verified by the study of Bounabri et al. (2018) that lack of top management commitment, communication and training were an issue during the implementation process. Further, Gojic (2012) proven that an inconsistent product is a product that, when subject to either planned or unplanned testing, fails to meet existing product requirements.

Table 6: Assessment of QA Management towards Performance Evaluation

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The organization has determined what needs to be monitored and measured and the methods for monitoring, measurement, analysis and needed evaluation to ensure valid results.	4.00	SA	3.42	SA	4.00	SA	3.81	SA
2. The organization has established a programme for an internal audit of the QMS.	3.70	SA	3.00	A	4.00	SA	3.57	SA

3. The organization has determined the need or opportunities for improvements within the QMS.	3.70	SA	3.75	SA	3.67	SA	3.71	SA
4. The organization has an approach to perform management reviews been established and implemented.	3.80	SA	2.92	A	3.67	SA	3.46	SA
5. The organization have methods of monitoring customer perceptions of the degree to which their needs and expectations have been fulfilled been established.	3.90	SA	3.58	SA	3.33	SA	3.61	SA
6. The organization determined how the need or opportunities for improvements within the QMS will be fed into management reviews.	3.80	SA	3.58	SA	3.33	SA	3.57	SA
Average Weighted Mean	3.82	SA	3.38	SA	3.67	SA	3.62	SA

SUC 1 got an average weighted mean 3.82 and with has a verbal interpretation of Strongly Agree. Item 1 received the highest mean of 4.00 stating that SUC 1 strongly agreed *“The organization has determined what needs to be monitored and measured and the methods for monitoring, measurement, analysis and needed evaluation to ensure valid results.”* Also, SUC 1 strongly agreed that *“The organization have methods of monitoring customer perceptions of the degree to which their needs and expectations have been fulfilled been established.”* (M = 3.90)

Table 6 shows the result of the attitude of the QA management towards the implementation of ISO 9001:2015 clause in terms of Performance Evaluation.

SUC 2 received an average weighted mean of 3.38 and with a verbal interpretation of *Strongly Agree*. Items 5 and 6 both got the highest mean of 3.58 stating that SUC 2 strongly agreed that *“The organization have methods of monitoring customer perceptions of the degree to which their needs and expectations have been fulfilled been established.”* And *“The organization determined how the need or opportunities for improvements within the QMS will be fed into management reviews.”*

SUC 3 got an average weighted mean of 3.62 and with a verbal interpretation of *Strongly Agree*. Items 1 and 2 both receives the highest mean of 4.00 stating SUC 3 that *“The organization has determined what needs to be*

monitored and measured and the methods for monitoring, measurement, analysis and needed evaluation to ensure valid results.” And, *“The organization has established a programme for an internal audit of the QMS.”*

Overall, this ISO 9001:2015 clause got an average weighted mean of 3.62 and with a verbal interpretation of Strongly Agree. The respondents strongly agreed that *the organization has determined what needs to be monitored and measured and the methods for monitoring, measurement, analysis and needed evaluation to ensure valid results* (M = 3.81). Likewise, they also strongly agreed that *the organization has determined the need or opportunities for improvements within the QMS* (M = 3.72). The results show that in terms of performance evaluation state universities were able to make mechanism that really assess the efficiency and effectivity of the QA management of ISO 9001:2015

In view of the results, Bacoup et al., (2018) concluded that all processes require a target, which must be reviewed at regular intervals (every one to six months). In further view to the results, Maina et al. (2014) concluded that internal audits and subsequent corrective steps play a critical role in catalyzing other areas for change.

Table 7 shows the result of the assessment of the QA management towards the implementation of ISO 9001:2015 clause in terms of Improvement.

Table 7: Assessment of QA Management towards Improvement

Statement	SUC 1 (n = 10)		SUC 2 (n=12)		SUC 3 (n=3)		Overall (N=25)	
	M	VI	M	VI	M	VI	M	VI
1. The organization has determined and selected	4.00	SA	3.58	SA	3.67	SA	3.75	SA

opportunities for improvement to meet customer requirements and enhance customer satisfaction.								
2. <i>The organization has not yet implemented the necessary actions to meet customer requirements and enhance customer satisfaction.</i>	3.70	SA	2.75	A	3.67	SA	3.37	SA
3. The organization has appropriate processes for managing nonconformities.	3.80	SA	3.50	SA	3.33	SA	3.54	SA
4. The organization has decided on how it will address the requirement to continually improve the suitability and adequacy of the QMS.	4.00	SA	3.50	SA	3.67	SA	3.72	SA
5. The organization has appropriate processes for the related corrective actions	3.90	SA	3.50	SA	3.33	SA	3.58	SA
6. <i>The organization has not yet decided on how it will address the requirement to continually improve and effectiveness of the QMS.</i>	3.60	SA	2.67	A	4.00	SA	3.42	SA
Average Weighted Mean	3.83	SA	3.25	SA	3.62	SA	3.57	SA

SUC 1 got an average weighted mean of 3.83 and with a verbal interpretation of *Strongly Agree*. Items 1 and 4 both got the highest mean of 4.00 stating that SUC 1 strongly agreed with the statements “*The organization has determined and selected opportunities for improvement to meet customer requirements and enhance customer satisfaction.*” and “*The organization has decided on how it will address the requirement to continually improve the suitability and adequacy of the QMS.*” SUC 3 received an average weighted mean of 3.62 and with a verbal interpretation of *Strongly Agree*.

Based on the result, this clause got an average weighted mean of 3.53 with a verbal interpretation of strongly agree. The respondents strongly agreed that *the organization has determined and selected opportunities for improvement to meet customer requirements and enhance customer satisfaction* (X=3.76). They also strongly agreed that *the organization has decided on how it will address the requirement to continually improve the suitability and adequacy of the QMS* (X=3.72). Further, the respondents disagreed that *the organization has not yet decided on how it will address the requirement to continually improve and effectiveness of the QMS* (X=3.20). With these results, the QA management of the state universities had established corrective measures for continual improvement of the performance of the ISO 9001:2015 implementation.

Putnik & Avila (2015) found that a significant portion of stakeholders are considered to contribute to the improvement of the QMS. Thus, Ollila (2012) concluded that the good features of ISO 9001 QMS in enhancing the organization's performance were summarized as follows: specific elements for good QMS, contract evaluations,

translation of tacit knowledge into explicit knowledge, internal and external audits and quality control of machinery and equipment in service.

VI. CONCLUSIONS AND RECOMMENDATIONS

On the assessment of the SUC's Quality Assurance Management towards the implementation of the ISO 9001:2015, it was revealed that SUCs scored high on the different clauses such as context of organization, leadership, planning, support, operation, performance evaluation, and improvement. Among these clauses, the context organization got the highest mean where the emphasis is on determining the external and internal issues that are relevant to its purpose and determined the needs and expectation of interested parties that are relevant to the QMS.

The second clause that has the highest mean is the leadership where the emphasis is on establishing and communicating QMS policy and objectives, taking the accountability of the top management of the organization for the effectiveness of the QMS, and determining and addressing the organization's risk and opportunities to enhance customer satisfaction.

The third clause that has the highest mean is the performance evaluation where the emphasis is on determining what organizations' needs to be monitored and measured and the methods for monitoring, measurement, analysis and needed evaluation to ensure valid results, and determining how the need or

opportunities for improvements within the QMS will be fed into management reviews.

The fourth clause that has the highest mean is the support where the emphasis are on determining and providing the resources needed for the establishment, implementation, maintenance and continual improvement of the QMS, ensuring that people doing work under their control are aware of the quality policy and objectives, their contribution to these and the implications of not conforming, and determining the knowledge necessary for the operation of its processes and achievement of conformity of products and services.

Fifth is the improvement clause where the emphasis is on determining and selecting opportunities for improvement to meet customer requirements and enhance customer satisfaction and deciding on how it will address the requirement to continually improve the suitability and adequacy of the QMS. The sixth clause is planning where the emphasis is on establishing quality objectives at relevant functions, levels and processes, planning actions to address the risks and opportunities, and assuring that QMS can achieve the intended result(s) from the addressed risks and opportunities. And the last clause is operation where the emphasis is on reviewing and communicating the process with customers in relation to information relating to products and services, enquiries, contracts or order handling.

For state universities and colleges, ISO 9001:2015 implementation is a clear evaluation indicator if an institution organizes a standard implementation of their processes and procedures in all their programs such as academic, training and research. Thus, it is recommended that higher educational institutions should be required to undergo ISO 9001:2015 certification to fully meet the satisfaction of the clientele they serve.

For the Quality Assurance Management of the different SUCs, they should make appropriate actions on the three ISO 9001:2015 clauses which got the lowest mean scores such as improvement, planning, and operation. They should review the different indicators of these clauses like the organization shall continually improve the suitability, adequacy and effectiveness of the quality management system. When the organization determines the need for changes to the quality management system, the changes shall be carried out in a planned manner.

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